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ANALYSIS OF S.C.A.T. ENTRANCE EXAMINATION, FALL 1964.

BY- GOLD, BENJAMIN K.
LOS ANGELES CITY COLL., CALIF.

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LITTLE DIFFERENCE IN THE PERFORMANCE OF THE 4,502 STUDENTS WHO TOOK THE SCHOOL AND COLLEGE APTITUDE TEST IN FALL 1964 AND THAT OF STUDENTS OVER THE PREVIOUS 7 YEARS CAN BE NOTED. PERFORMANCE HAS REMAINED CONSISTENTLY BELOW THE NATIONAL NORM, ESPECIALLY IN THE QUANTITATIVE AREA. MALE PERFORMANCE WAS BETTER THAN THAT OF FEMALES. THERE IS LITTLE CORRELATION BETWEEN SCORES AND AGE. THE PERFORMANCE OF STUDENTS FROM SOUTHERN STATES WAS THE POOREST OF ANY GROUP. ONE-FOURTH OF ALL STUDENTS TAKING THE ENTRANCE EXAMINATION HAD ATTENDED COLLEGE PREVIOUSLY, AND THEIR PERFORMANCE WAS DEFINITELY SUPERIOR TO THAT OF THE FIRST-TIME STUDENTS. (HS)

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LOS ANGELES CITY COLLEGE

"ANALYSIS OF S.C.A.T. ENTRANCE EXAMINATION, FALL, 1964"

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Ben K. Gold

November, 1964

JC 660 044

"ANALYSIS OF S.C.A.T. ENTRANCE EXAMINATION, FALL, 1964"

PURPOSE OF THE STUDY

To analyze student performance on the SCAT entrance examination and to compare performance with previous years and with national norms.

PROCEDURE OF THE STUDY

With the help and cooperation of Mr. Ben Kuramoto, IBM cards were punched for all students taking the Fall, 1964 entrance examination. Information punched into the cards included the student's name, address, age, sex, three SCAT raw scores, and code numbers indicating last high school attended and last college attended, if any. In addition to being of use to provide data for this study, the punched card arrangement permitted providing automatically an alphabetized list of all examination results, individual score tapes for attachment to personnel cards, address tapes for mailing probation notices, and an alphabetized list of students placed on probation because of low entrance examination scores. Other uses are anticipated. Appreciation is expressed to Mr. Marshall Elder of the Mathematics Department for programming and utilizing campus electronic computers to calculate means and standard deviations.

FINDINGS

4502 students, of whom 2428 or 53.9% were male, took the SCAT entrance test for admission to L.A.C.C. for the Fall, 1964 semester. Overall performance of these students is indicated by the statistics presented in Table I. Comparison can be made with the previous six fall semesters and with national norms. Little difference in performance over the seven years that SCAT has been used can be noted. Performance has remained consistently below national norms, especially in the quantitative area. It should be noted that the national norms

used are for all college freshman. A set of norms for California junior colleges is now in preparation and it will be interesting to compare L.A.C.C. performance with these norms, which should be available in a few months.

Table 2 indicates variation in performance by date of examination. It is clear that there is a high correlation between date of test and performance. Percentage students on probation increases sharply as the opening of the semester approaches. This can be seen clearly in Figure 2 also.

Male performance on SCAT is clearly superior to that of females. Table 3 indicates the statistics for each sex group. The percent female on probation is over 50% greater than the percent male on probation. Greatest difference in performance between male and female is in the quantitative area. Figure 1 indicates the relative performances of the two sexes, and compares performance with national norms. In this figure, each rectangle would reach to exactly the ten percent ordinate if L.A.C.C. students matched the national norms. It can be noted that in Verbal performance, L.A.C.C. is much closer to national norms than in quantitative performance. Male performance is just slightly superior to female performance in verbal ability, but greatly superior in quantitative.

Table 3 summarizes SCAT performance by age. Age has apparently little relation to SCAT performance. It is interesting to note, however, that L.A.C.C. has more females than males in the age brackets below 18 and above 30. Between these ages, more males than females attend L.A.C.C.

Tables 5, 5a, and 5b summarize performance according to location of last high school attended. Fifty-five percent of those taking the test last attended a Los Angeles City high school. The remainder last attended high schools in 47 other states and in a score of foreign countries. Southern states produced the largest number of entrants outside of California. Performance of these students from Southern states was the poorest of any group including foreign students, and was the only group outside of California which was composed of

more females than males. Students from Northeastern states performed better on the SCAT than any other group. Considerable variation in performance can be noted among students who attended various Los Angeles City high schools. Figures were available showing the actual numbers of registrants from these schools. It can be noted that consistently about two-thirds of those who took the entrance examination actually registered, with the exception of Manual Arts High School. A special administration of the test was given at Manual and apparently a large number of students took the test with no intention of registering at L.A.C.C., as less than half of those taking the test registered.

Table 6 indicates that one fourth of the students taking the test had attended college previously. If these students are not considered, the percent of entering students on probation becomes 22.3% instead of 19.3%.

TABLE I - Performance of L.A C.C. Entering Students on the SCAT Entrance Examination, Seven Year Summary (Fall semesters)

	Semester	Mean	Std. Dev.	Median	Lower Quartile	Upper Quartile	No. of Students
(Converted Scores)							
TOTAL	Fall 1964	292.3	14.4	293	283	302	4502
	Fall 1963	291.8	14.4	293	282	303	4921
	Fall 1962	291.9	14.9	292	282	303	4660
	Fall 1961	292.7	14.6	294	283	303	3959
	Fall 1960	293.3	14.5	294	283	302	3955
	Fall 1959	292.3	14.8	293	282	303	4084
	Fall 1958	*	*	292	282	302	4357
	National	298	14	300	290	307	**
VERBAL	Fall 1964	289.9	16.6	291	279	301	4502
	Fall 1963	289.9	16.5	292	280	301	4921
	Fall 1962	289.8	17.2	291	279	302	4660
	Fall 1961	290.1	17.1	291	279	301	3959
	Fall 1960	290.4	16.5	291	279	300	3955
	Fall 1959	289.8	17.2	291	278	301	4084
	Fall 1958	*	*	291	278	301	4357
	National	294	16	296	286	305	**
QUANTITATIVE	Fall 1964	294.3	18.0	294	281	308	4502
	Fall 1963	292.9	18.3	293	279	307	4921
	Fall 1962	293.3	18.5	294	280	307	4660
	Fall 1961	294.8	18.0	296	281	309	3959
	Fall 1960	293.9	17.9	296	281	309	3955
	Fall 1959	293.8	18.0	295	279	307	4084
	Fall 1958	*	*	293	279	307	4357
	National	302	18	305	292	316	**

* Not available

** 1180 students in 99 colleges

TABLE 2 - Fall, 1964 Entrance Examinations Summary by Date of Test

	DATE OF TEST									Grand
	May 16	May 23	May 28*	June 6	July 15	July 30	Aug. 15	Aug. 26	Sep. 10	Total
No. of Students	523	330	120	403	731	493	626	748	528	4502
No. of males	179	167	48	225	384	292	360	453	320	2428
% male	34.2%	50.6%	40.0%	55.8%	52.5%	59.2%	57.5%	60.6%	60.6%	53.9%
No. on Prob.	58	34	55	46	124	105	118	188	140	868
% on Prob.	11.1%	10.3%	45.8%	11.4%	16.9%	21.3%	18.9%	25.1%	26.5%	19.3%
TOTAL										
Raw Score Mean	59.8	59.7	43.2	61.1	58.6	57.1	58.8	54.1	55.5	57.4
Raw Score Std. Dev.	17.1	16.9	13.2	17.8	19.0	20.5	20.9	19.9	21.0	19.5
Converted Score Mean	294.3	294.1	282.0	295.2	293.2	292.1	293.3	289.9	290.8	292.3
Converted Sc. Std. Dev.	12.3	12.3	10.6	12.8	13.8	15.2	15.6	14.8	15.7	14.4
VERBAL										
Raw Score Mean	31.0	29.6	20.2	31.3	30.3	30.1	31.4	28.6	29.5	29.9
Raw Score Std. Dev.	10.3	10.2	6.7	10.5	11.1	12.2	12.1	11.5	12.4	11.4
Converted Score Mean	291.7	289.8	275.4	292.0	290.5	290.1	291.9	287.8	289.1	289.9
Converted Sc. Std. Dev.	14.5	14.7	12.8	14.7	15.9	17.7	17.3	16.9	18.0	16.6
QUANTITATIVE										
Raw Score Mean	28.8	30.0	22.9	29.8	28.2	26.9	27.4	25.4	25.9	27.4
Raw Score Std. Dev.	10.0	9.8	8.4	10.1	10.5	10.8	11.3	10.9	11.6	10.8
Converted Sc. Mean	296.7	298.6	287.0	298.3	295.6	293.4	294.2	290.9	291.6	294.3
Converted Sc. Std. Dev.	16.6	16.1	14.0	16.7	17.3	18.1	18.9	18.3	19.4	18.0

* special test administration at Manual Arts High School.
all others were given at LACC and open to all

TABLE 3 - Fall, 1964 Entrance Examinations Summary by Sex

	Male	Female	Grand Total
Number of Students	2428	2074	4502
Number on Probation	383	485	868
% on Probation	15.8%	23.4%	19.3%
TOTAL			
Raw Score Mean	59.9	54.5	57.4
Raw Score Standard Deviation	19.7	18.9	19.5
Converted Score Mean	294.2	290.2	292.3
Converted Score Standard Deviation.	14.5	14.1	14.4
VERBAL			
Raw Score Mean	30.2	29.5	29.9
Raw Score Standard Deviation	11.6	11.3	11.4
Converted Score Mean	290.3	289.3	289.9
Converted Score Standard Deviation.	16.7	16.4	16.6
QUANTITATIVE			
Raw Score Mean	29.6	24.9	27.4
Raw Score Standard Deviation	10.7	10.3	10.8
Converted Score Mean	297.9	290.1	294.3
Converted Score Standard Deviation.	17.8	17.3	18.0

TABLE 4 - Fall, 1964 Entrance Examination Summary by Age

AGE	Total No.	No. Male	% Male	No. on Probation	% on Probation	% of Grand Total
Less than 17	64	28	44%	11	17%	1.4%
17	1466	677	46%	217	15%	32.6%
18	1192	651	55%	292	24%	26.5%
19	436	270	62%	109	25%	9.7%
20	228	149	65%	42	18%	5.1%
21	185	131	71%	33	18%	4.1%
22	125	94	75%	23	18%	2.8%
23	119	73	61%	23	19%	2.6%
24	91	65	71%	15	16%	2.0%
25	86	45	52%	11	13%	1.9%
26-30	193	114	59%	31	16%	4.3%
31-35	76	34	45%	10	13%	1.7%
36-40	48	15	31%	11	23%	1.1%
41-50	74	25	34%	19	26%	1.6%
over 50	26	6	23%	10	39%	0.6%
Not stated	93	51	---	11	---	2.1%
TOTAL	4502	2428	53.9%		19.3%	100.0%

TABLE 5 - Fall, 1964 Entrance Examination Summary by Last High School Attended

Location of School	Total No.	No. Male	% Male	No. on Probation	% on Probation	% of Grand Total
L.A. City High School	2487	1326	53.3%	465	18.7%	55.2%
Other Calif. Public	470	226	48.1%	62	13.2%	10.4%
Calif. Private H.S.	296	156	52.7%	32	10.8%	6.6%
Other Western States	171	114	66.7%	20	11.7%	3.8%
West Central States	33	22	66.7%	6	18.2%	0.7%
Central States	170	100	58.8%	19	11.2%	3.8%
So. Central States	78	43	55.1%	23	29.5%	1.7%
Southern States	347	165	47.6%	169	48.7%	7.7%
Northeastern States	180	108	60.0%	12	6.7%	4.0%
Foreign	261	165	63.2%	56	21.4%	5.8%
Not stated	9	3		4		0.2%
TOTAL	4502	2428	53.9%	868	19.3%	100.0%

TABLE 5a - Fall, 1964 Entrance Examination Summary by Last High School Attended
L.A. City Schools

School	Total No.	No. Male	% Male	No. on Probation	% on Probation	No.Reg. LACC	% Reg.
Fairfax	295	162	55%	17	6%	216	73%
Los Angeles	292	160	55%	47	16%	177	61%
Manual Arts	230	105	46%	98	43%	110	48%
Marshall	214	124	58%	14	7%	146	68%
Dorsey	203	110	54%	43	21%	127	63%
Hollywood	181	103	57%	16	9%	112	62%
Belmont	168	106	63%	32	19%	96	57%
Hamilton	150	74	49%	6	4%	98	65%
Fremont	138	53	38%	44	32%	89	64%
Jefferson	115	59	51%	46	40%	67	64%
Washington	98	52	53%	24	24%	62	63%
Franklin	56	35	62%	4	7%	39	70%
Lincoln	54	31	57%	16	30%	33	61%
Roosevelt	52	28	54%	7	13%	35	67%
University	26	17	65%	1	4%	10	38%
Eagle Rock	25	14	56%	2	8%	17	68%
Jordan	20	7	35%	8	40%	9	45%
Westchester	13	8	62%	0	0%	5	38%
North Hollywood	12	5	42%	0	0%	7	58%
* Others	145	73	50%	40	28%	116	80%
T O T A L	2487	1326	53.3%	465	18.7%	1571	63.2%

* 24 schools, none over 10 students

TABLE 5b - Fall, 1964 Entrance Examination Summary by Last High School Attended Areas Outside of Los Angeles City

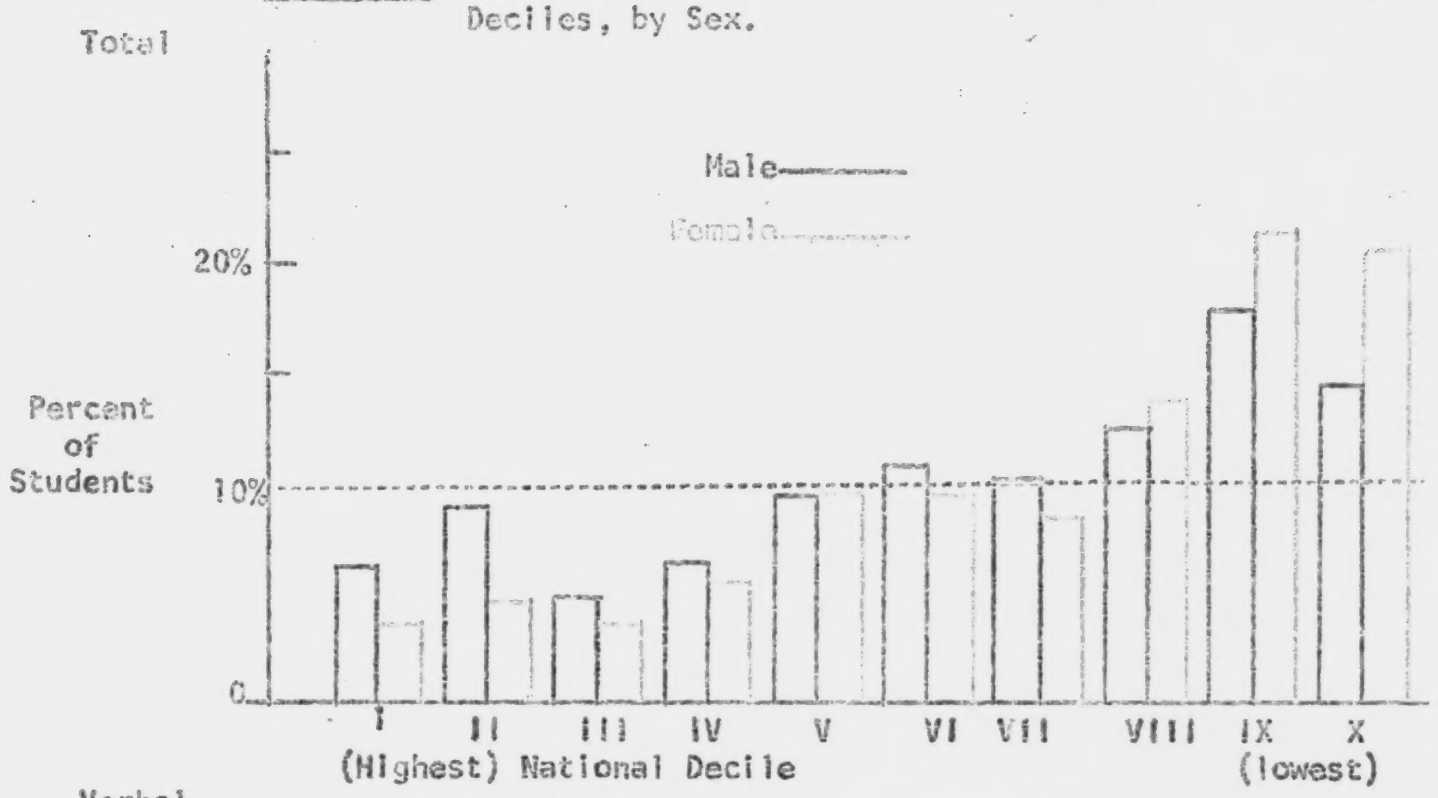
LOCATION	No. of Students	No. on Prob.
CALIFORNIA		
Beverly Hills	16	0
Burbank	27	1
Other Public	427	61
Private	296	32
OTHER WESTERN STATES		
Hawaii	135	16
Alaska	1	0
Arizona	12	1
Nevada	5	1
Oregon	6	2
Washington	12	0
WEST CENTRAL		
Colorado	6	1
Idaho	1	0
Montana	2	1
Nebraska	5	0
New Mexico	11	3
South Dakota	2	0
Utah	3	0
Wyoming	3	1
CENTRAL		
Illinois	49	5
Indiana	18	5
Iowa	12	1
Michigan	38	5
Minnesota	13	0
Ohio	34	3
Wisconsin	6	0
SOUTH CENTRAL		
District of Columbia	7	1
Kansas	8	3
Kentucky	7	2
Maryland	6	1
Missouri	20	7
Oklahoma	18	8
Virginia	10	0
West Virginia	2	1

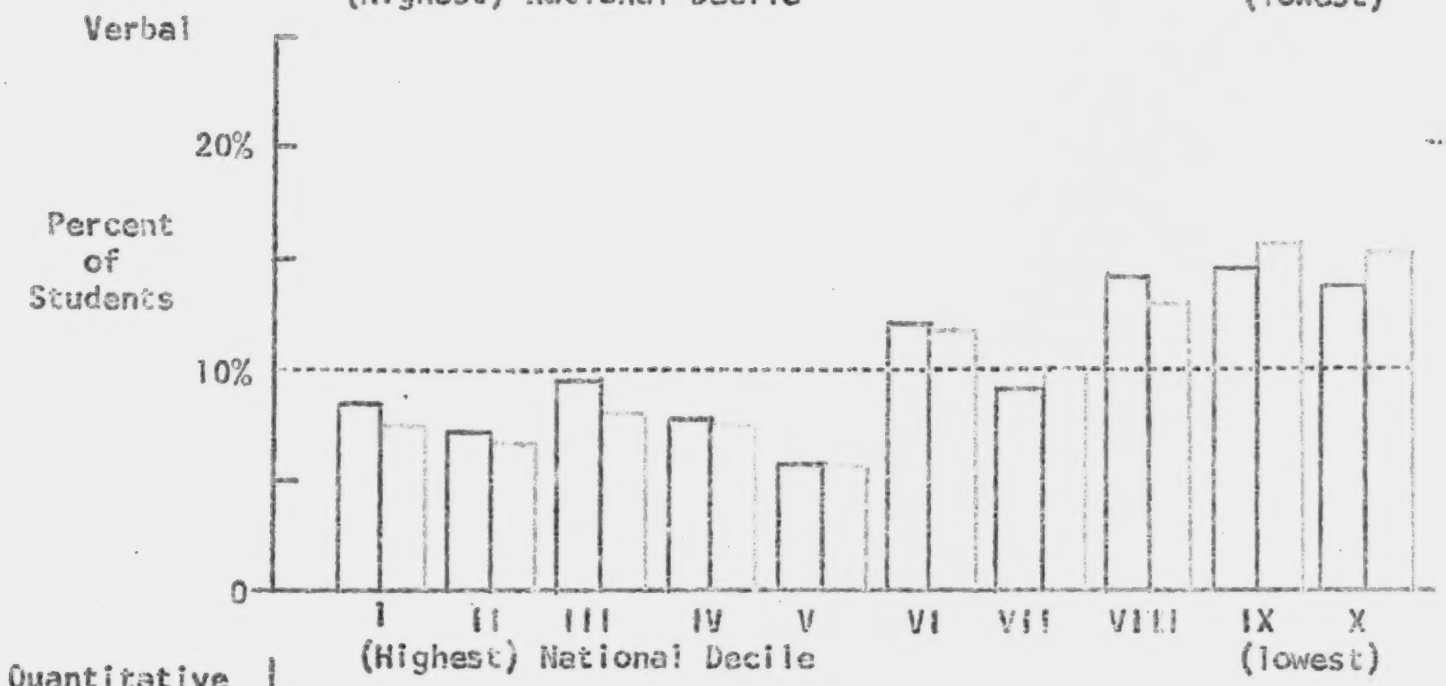
LOCATION	No. of Students	No. on Prob.
SOUTH		
Alabama	34	19
Arkansas	24	16
Florida	29	10
Georgia	11	3
Louisiana	74	46
Mississippi	17	7
No. Carolina	8	1
So. Carolina	5	0
Tennessee	23	13
Texas	122	54
NORTHEAST		
Connecticut	15	2
Delaware	2	0
Maine	3	0
Massachuetts	16	3
New Hampshire	2	0
New Jersey	26	3
New York	79	2
Pennsylvania	35	1
Rhode Island	2	1
FOREIGN		
Latin America	88	26
Canada	20	1
Africa	5	1
Far East	32	8
Middle East	38	4
Western Europe	43	6
Eastern Europe	8	2
South Pacific	5	2
Other	22	6

TABLE 6 - Fall, 1964 Entrance Examination Summary by Previous College Attended

COLLEGE	Total No.	No. Male	% Male	No. on Prob.	% on Prob.	% of Grand Total
None	3356	1776	52.9%	748	22.3%	74.5%
L.A. City Junior Colleges	445	254	57.1%	61	13.7%	9.9%
Other Junior Colleges	237	131	55.3%	18	7.6%	5.3%
California State Colleges	77	39	50.6%	1	1.3%	1.7%
University of California	71	38	53.5%	0	0%	1.6%
Other	316	190	60.1%	40	12.7%	7.0%
T O T A L	4502	2428	53.9%	868	19.3%	100.0%

Figure 1. L.A.C.C. Performance on SCAT, Fall, 1964 According to National Deciles, by Sex.





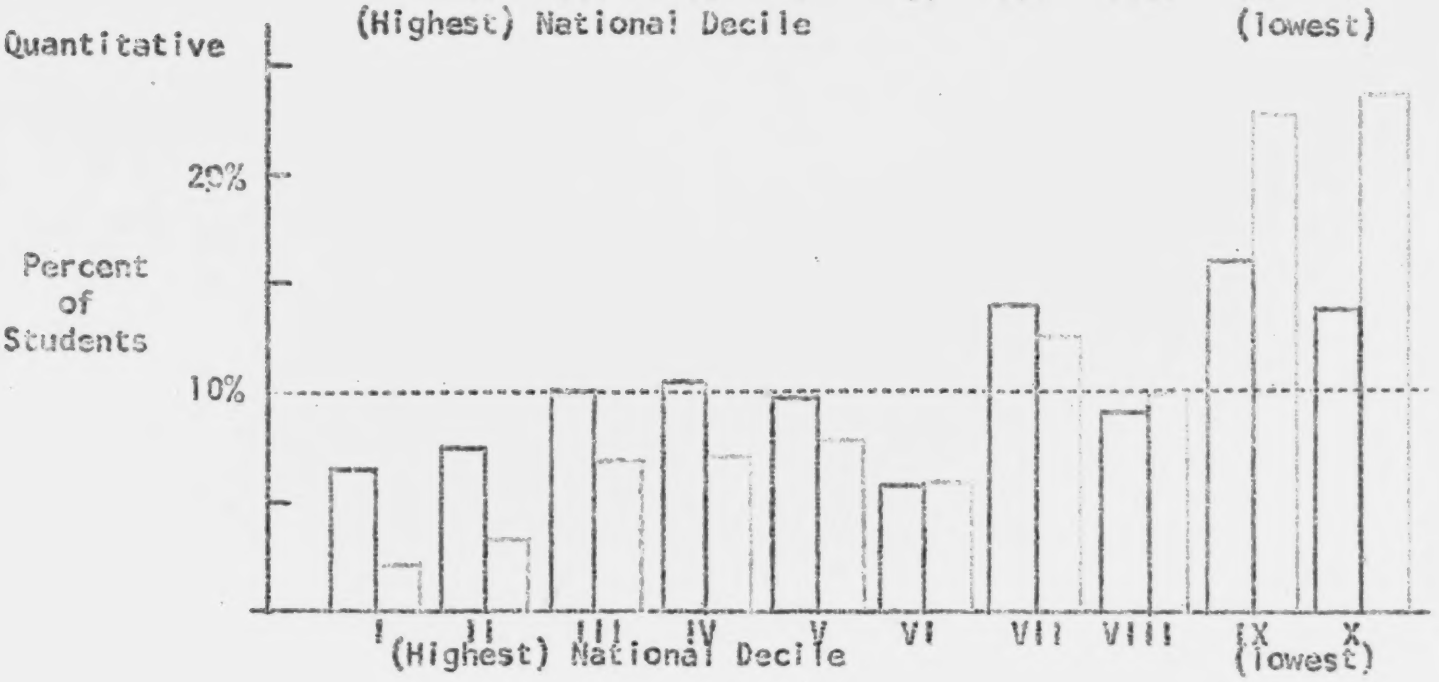
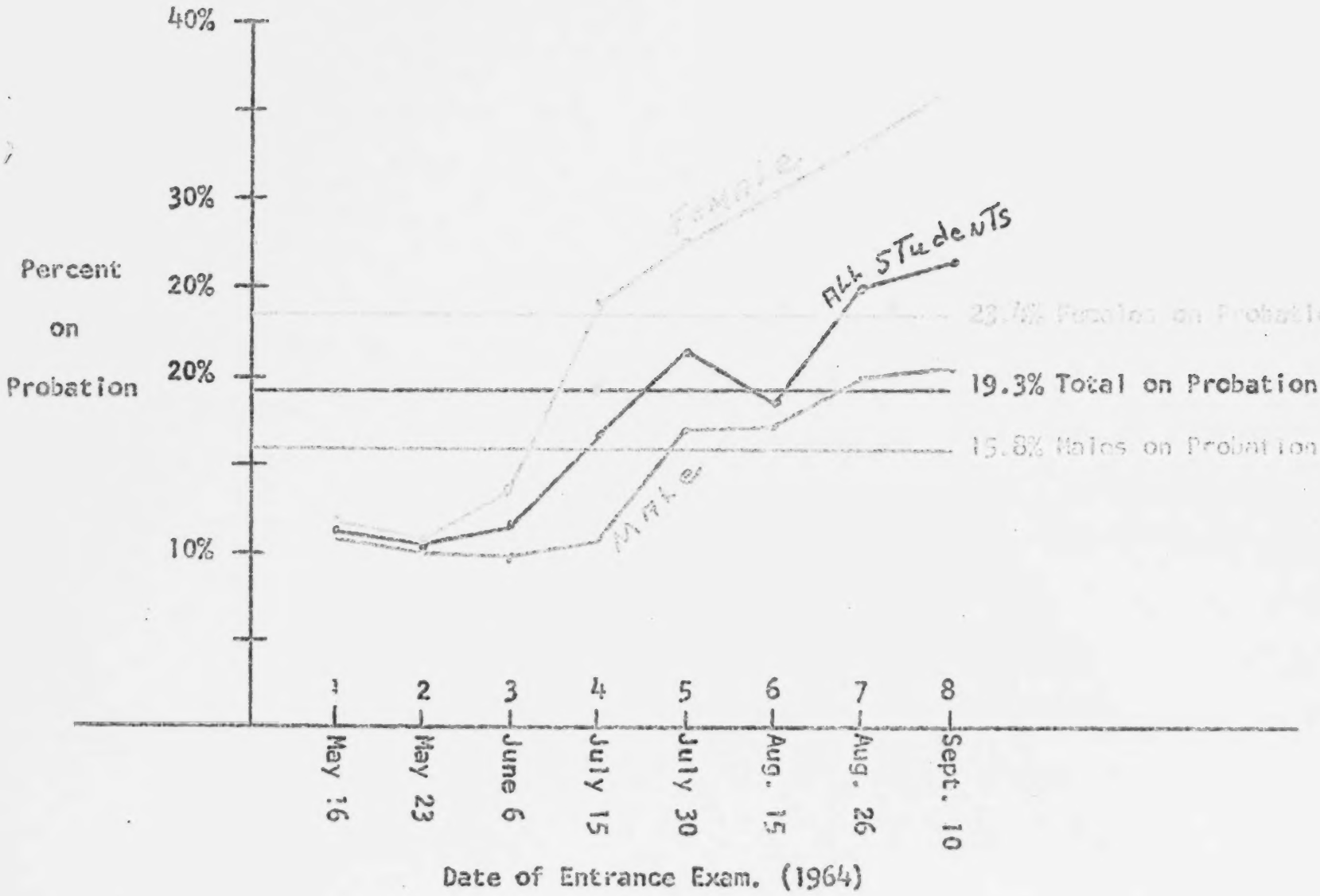


Figure 2. - Percent of Students on Probation Because of Entrance Examination Score, Fall, 1964, by Date of Test and Sex.



SUMMARY AND CONCLUSIONS

This study summarizes performance of Fall, 1964 entrants on the SCAT entrance examination. The following statements appear to have some significance:

(1) 4502 students took the examination, a decrease of 419, or 9% from Fall, 1963. This is the first year since Fall 1959, that has not shown an increase over the previous year.

(2) No significant differences in performance by L.A.C.C. students on the entrance examination can be detected over the seven years the SCAT has been used. Average L.A.C.C. performance has remained at about the 40th national college freshmen percentile on the Verbal part of the test, the thirtieth percentile on the Quantitative part, and the thirty fifth percentile in Total performance.

(3) About 54% of those taking the Fall, 1964 SCAT were male. Performance of male students on the test was clearly superior to that of female students. About one in six males placed below the cutoff for first semester probation, as compared with about one in four females. Greatest difference between the sexes shows in the Quantitative part of the test, but males average slightly higher in Verbal performance also.

(4) Those students who take the test well before the beginning of the semester performed much better than those who took the test at one of the later dates. Those taking the regularly scheduled offerings of the examination prior to the close of school in June 1964 performed at or above the national college freshman level. Those who took the examination after the close of summer school averaged proportionately over twice as many students on probation as those taking the earlier tests.

(5) In the 19-24 years of age bracket, about two-thirds of the entrants are male. Over age 30 and below age 18, well over half of the entrants are female. Median age for entrants is about 18½ years of age, with ages of entrants ranging from 15 to 78. One third of the entrants are seventeen years or younger, one third are eighteen or nineteen, and the remaining third are older, with one in ten over twenty five. Age is apparently not an important factor in performance on the SCAT, although the seventeen year olds appear to perform slightly above average, and those over thirty five somewhat below average.

(6) Location of last high school attended shows a strong relation to performance on the SCAT. Over half of the entrants are from L. A. City high schools. Average performance of these students is about equivalent to that of out-of-city students. Ratio of male to female is also about the same. Within the two groups (In L. A. City and out-of-L.A. City) however, there is considerable difference in performance.

84% of the L. A. City high school students come from eleven schools, although a total of 43 schools are represented. Of these eleven schools, best performance on the SCAT is shown by students from Fairfax, Hamilton, Marshall, and Hollywood. Each of these schools furnished over 100 entrants and all showed less than 10% below the probation cutoff. Poorest showing was made by students from Manual Arts, Jefferson, and Fremont. Of all the L. A. City high school students taking the entrance examination, about two thirds actually registered at L.A.C.C.

Of students from high schools outside of Los Angeles City, students from New England states performed best, with less than ten percent being placed on probation. Other areas showing good performance were California

private schools, Western and Central States. Poorest performance was by those from Southern states, which region furnished the largest number of entrants outside of California. Southern states also furnished the proportion of female students, being the only geographical area to contribute more females than males.

(7) One fourth of all students taking the entrance examination had attended some college previously. Junior colleges accounted for about two-thirds of this previous college attendance. Performance on the SCAT of those who had attended college previously was definitely superior to that of the remaining entrants. If students with previous college attendance are excluded, SCAT performance shows 22% below the cutoff for probation, instead of 19%.

Most of the comparisons of performance between groups reported above are based on the relative numbers of students who scored below the probation cutoff. With the results of the SCAT now being punched into IBM cards, it is now possible to calculate other statistics, such as means and standard deviations, for various groups. These calculations are now in process, and any significant results will be reported in future studies.